

PROPOSED

IN THE CLAIMS:

1. (Currently amended) A method of deleting object data from a relational database, comprising:

determining a structure of the relational database, wherein determining the structure of the relational database includes invoking a database meta-information class object associated with the relational database;

determining a delete action based on the structure of the relational database; generating database modification commands based on the determined delete action; and

sending the database modification commands to a relational database server, wherein the relational database server deletes the object data from the relational database based on the database modification commands, wherein the database meta-information class object includes a delete action identifier for each dependent table of a plurality of tables in the relational database.

2. (Canceled)

3. (Previously presented) The method of claim 1, wherein the database meta-information class object encapsulates a dependency structure of the relational database.

4. (Canceled)

5. (Currently amended) The method of claim [[4]] 1, wherein the delete action identifier is one of a cascade delete identifier and a nullify columns delete identifier.

6. (Original) The method of claim 1, wherein the delete action is one of cascade delete and nullify columns delete.

7. (Previously presented) The method of claim 1, wherein the database meta-information class object is generated based on a file describing the structure and delete actions for tables in the relational database.
8. (Original) The method of claim 7, wherein the file is an Extended Markup Language file.
9. (Original) The method of claim 7, wherein the file is further generated based on user input to override default delete action identifiers in the file.
10. (Original) The method of claim 7, wherein the file is further generated based on user input to insert one or more delete constraints in the file for one or more of the tables in the relational database.
11. (Original) The method of claim 1, wherein the database modification commands are Structured Query Language (SQL) statements.
12. (Currently amended) A system for deleting object data from a relational database, comprising:
 - a data processor; and
 - a relational database storage device, wherein the data processor determines a structure of the relational database, wherein the data processor determines the structure of the relational database by invoking a database meta-information class object associated with the relational database, determines a delete action based on the structure of the relational database, generates database modification commands based on the determined delete action and sends the database modification commands to the relational database storage device, wherein the relational database storage device deletes the object data from the relational database based on the database modification commands, wherein the database meta-information class object further includes a delete action identifier for each table of a plurality of tables in the relational database.

13. (Canceled)

14. (Previously presented) The apparatus of claim 12, wherein the database meta-information class object encapsulates a dependency structure of the relational database.

15. (Canceled)

16. (Currently amended) The apparatus of claim [[15]] 12, wherein the delete action identifier is one of a cascade delete identifier and a nullify columns delete identifier.

17. (Previously presented) The apparatus of claim 12, wherein the database meta-information class object is generated based on a file describing the structure and delete actions for tables in the relational database.

18. (Original) The apparatus of claim 17, further comprising a file editor application executed by the data processor, wherein the file editor application changes the delete action in the file for one or more of the tables in the relational database based on a user input to override default delete action identifiers in the file.

19. (Original) The apparatus of claim 18, wherein the file editor application inserts one or more delete constraints into the file for one or more of the tables in the relational database, based on a user input.

20. (Currently amended) A method of generating a class for deletion of data representations of objects in a relational database, comprising:

determining a structure of the relational database;
determining one or more delete actions based on the structure of the relational database; and

generating the class object based on the determined structure and the determined one or more delete actions, wherein generating the class object includes encapsulating

information identifying the structure of the relational database and the one or more delete actions.

21. (Canceled)

22. (Currently amended) The method of claim [[21]] 20, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

23. (Original) The method of claim 20, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

24. (Original) The method of claim 20, wherein the structure of the relational database and the one or more delete actions are determined from a file describing the structure and delete actions for tables in the relational database.

25. (Original) The method of claim 24, wherein the file is further generated based on user input to override default delete action identifiers in the file.

26. (Original) The method of claim 24, wherein the file is further generated based on user input to insert one or more delete constraints in the file.

27. (Currently amended) An apparatus for generating a class object for deletion of data representations of objects in a relational database, comprising:

means for determining a structure of the relational database;

means for determining one or more delete actions based on the structure of the relational database; and

means for generating the class object based on the determined structure and the determined one or more delete actions, wherein the means for generating the class object encapsulates information identifying the structure of the relational database and the one or more delete actions.

28. (Canceled)

29. (Currently amended) The apparatus of claim [[28]] 27, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

30. (Original) The apparatus of claim 27, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

31. (Original) The apparatus of claim 27, wherein the means for determining the structure of the relational database and the means for determining the one or more delete actions determine the structure and one or more delete actions from a file describing the structure and delete actions of tables in the relational database.

32. (Original) The apparatus of claim 31, further comprising means for generating the file, wherein the file is generated based on Java Database Connectivity (JDBC) database metadata associated with the relational database.

33. (Original) The apparatus of claim 32, wherein the file is further generated based on user input to override default delete action identifiers in the file.

34. (Original) The apparatus of claim 32, wherein the file is further generated based on user input to insert one or more delete constraints in the file.

35. (Currently amended) A computer program product in a computer readable medium for generating a class object for deletion of data representations of objects in a relational database, comprising:

first instructions for determining a structure of the relational database;
second instructions for determining one or more delete actions based on the structure of the relational database; and
third instructions for generating the class object based on the determined structure and the determined one or more delete actions, wherein the third instructions include

instructions for encapsulating information identifying the structure of the relational database and the one or more delete actions.

36. (Cancelled)

37. (Currently amended) The computer program product of claim [[36]] 35, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

38. (Original) The computer program product of claim 35, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

39. (Original) The computer program product of claim 35, wherein the first and second instructions determine the structure of the relational database and the one or more delete actions from a file describing the structure and delete actions for tables in the relational database.

40. (Original) The computer program product of claim 39, further comprising fourth instructions for generating the file based on Java Database Connectivity (JDBC) database metadata associated with the relational database.

41. (Original) The computer program product of claim 39, wherein the fourth instructions further include instructions for generating the file based on user input to override default delete action identifiers in the file.

42. (Original) The computer program product of claim 39, wherein the fourth instructions further include instructions for generating the file based on user input to insert delete action constraints in the file.

43. (Currently amended) A computer program product in a computer readable medium for generating a class object for deletion of data representations of objects in a relational database, comprising:

a meta-information class for determining a structure of the relational database and one or more delete actions based on the structure of the relational database; and

a database meta-information generator class for generating the class object based on the determined structure and the determined one or more delete actions, wherein the database meta-information generator class encapsulates information identifying the structure of the relational database and the one or more delete actions into the class object.

44. (Canceled)

45. (Currently amended) The computer program product of claim [[44]] 43, wherein the one or more delete actions is at least one of cascade delete and nullify columns delete.

46. (Currently amended) A method of generating a class for deletion of data representations of objects in a relational database, comprising:

determining a structure of the relational database;

determining one or more default delete actions based on the structure of the relational database;

receiving user input to modify the one or more default delete actions; and

generating the class object based on the determined structure, the determined one or more default delete actions and the user input, wherein the class object encapsulates the determined structure, the determined one or more default delete actions and the user input.

47. (Original) The method of claim 46, wherein the user input overrides one or more of the one or more default delete actions.

48. (Original) The method of claim 46, wherein the user input inserts one or more delete action constraints.